

What is claimed is:

1. An orbiting multi-rotor homopolar machine comprising:

a plurality of axially parallel, equally spaced, cylindrical, magnet rotors arranged circumferentially around periphery of a central stator ring whose axis is parallel to each magnet rotor axis;

rolling means attached separately to magnet rotors and to the stator ring for intimately contacting and enabling high friction non-slip rolling between magnet rotors and stator ring;

means for starting and sustaining orbiting rolling of magnet rotors around stator ring as required;

bearing means rotatably securing the top and bottom ends of each magnet rotor to a corresponding circular endplate;

axle means located in the center of the stator ring rigidly attached to top circular endplate;

electrically insulating bearing means rotatably securing the center of bottom circular endplate to a coaxial inner cylinder located in between the axle and stator ring; and

circular assembly means for rigidly attaching inner cylinder to stator ring.

2. The homopolar machine of claim 1 wherein the inner cylinder, circular assembly means, magnet rotors, axle means, circular endplate, and stator ring are made at least partially from electrically conductive material.

3. The homopolar machine of claim 1 wherein the rolling means comprises an electrically conductive geared electromechanical rotary joint.

4. The homopolar machine of claim 1 wherein the rolling means comprises an electrically conductive copper coating on the stator ring and magnet rotors.

5. The homopolar machine of claim 1 wherein the stator ring is comprised of electrically conductive magnetic material.

5 6. A method for starting and sustaining the orbiting of rolling cylindrical magnets arranged parallel to and circumferentially around the vertical axis of a central stator ring, while intimately contacting and engaging non-slip rolling between rotor magnets and the stator ring, rotatably securing the top and bottom ends of each rotor magnet by means of a bearing to a corresponding circular endplate, rigidly attaching to the top circular endplate by means of a coaxial vertical
10 axle in the stator ring, securing the center of bottom circular endplate to a coaxial inner cylinder located between the axle and the stator ring by means of an electrically insulating bearing, and rigidly attaching inner cylinder to stator ring by means of a circular assembly.

15 7. An orbiting multi-rotor homopolar machine comprising:
a plurality of axially parallel, equally spaced, cylindrical, magnet rotors arranged circumferentially around periphery of a central stator ring whose axis is parallel to each magnet rotor axis;
rolling means attached separately to magnet rotors and to the stator
20 ring for intimately contacting and enabling high friction non-slip rolling between magnet rotors and stator ring;
means for starting and sustaining orbiting rolling of magnet rotors around stator ring as required;
bearing means rotatably securing the top and bottom ends of each
25 magnet rotor to a corresponding circular endplate;
axle means located in the center of the stator ring rigidly attached to top circular endplate;
electrically insulating bearing means rotatably securing the center of bottom circular endplate to a coaxial inner cylinder located in between the axle and
30 stator ring; and

circular assembly means for rigidly attaching inner cylinder to stator ring; and where in said inner cylinder, said circular assembly means, said magnet rotors, said axle means, said circular endplate, and said stator ring are made at least partially from electrically conductive material.

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8. The homopolar machine of claim 7 wherein the rolling means comprises an electrically conductive geared electromechanical rotary joint.

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9. The homopolar machine of claim 7 wherein the rolling means comprises an electrically conductive copper coating on the stator ring and magnet rotors.

10. The homopolar machine of claim 7 wherein the stator ring is comprised of electrically conductive magnetic material.

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Respectfully Submitted,



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